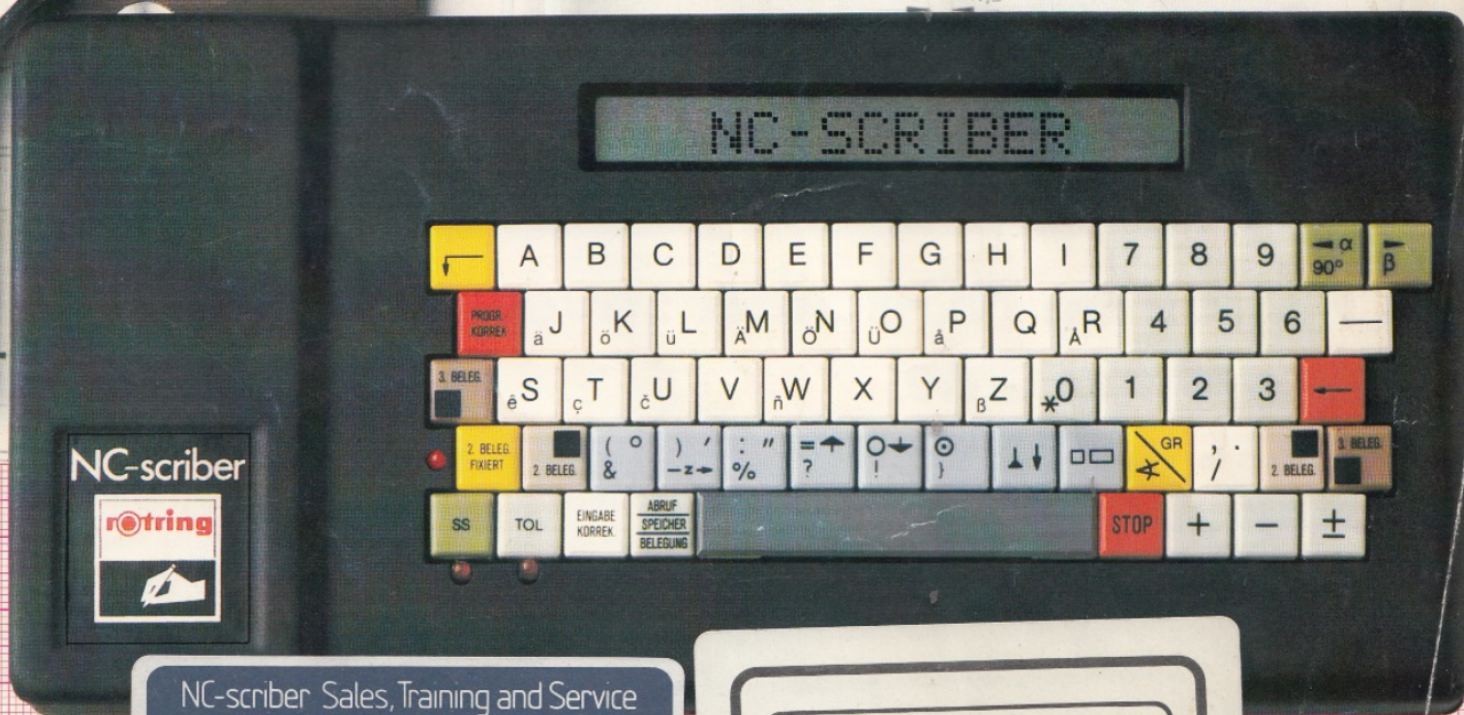
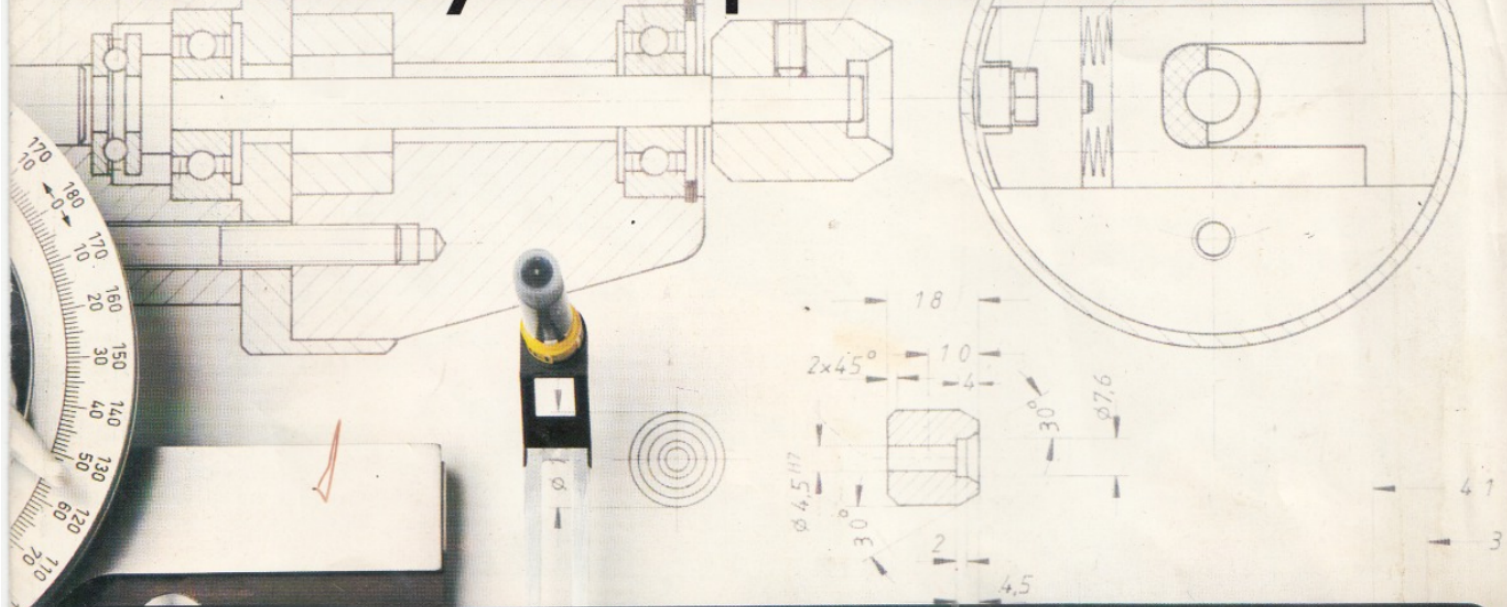


For the drawing office:

# The rotring NC-scriber.

Texts and symbols process controlled.



NC-scriber Sales, Training and Service

**rotring** **NC**

Appointed Dealer

**T. S. Graphic Centre**

Drawing Office and Studio  
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# rotring

Writing and Drawing Equipment

NC  
Scriber.

Peter Williams  
855 7104



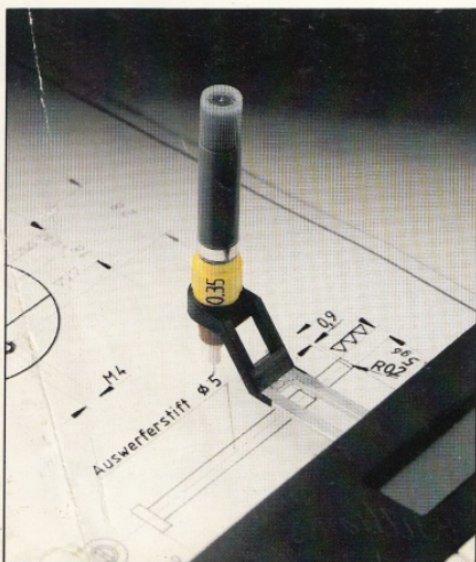
# Lettering and dimensioning on technical drawings demands skill, routine and time . . .



## . . . the rotring NC-scriber saves up to 80% drafting time.

### And it saves a lot of effort

Strictly speaking, it's that part of manual lettering work which depends solely on fine motorial dexterity and skilled routine.



### Speed and precision

Ultra-precise stepping motors connected up with a motion transmission almost entirely free of play, lend the plotter arm of the rotring NC-scriber a high precision motorial capacity unmatched by human hand.

### Microprocessors control all movements

Plotting motions are performed in minute steps of 1/100 mm at high speed. The microprocessors in the NC-scriber take care of the "skilled routine" and the true-to-standard execution. They possess an absolutely reliable memory for all details.





# You'll get used to operating the

## Technical description

The rotring NC-scriber simplifies precise, true-to-standard lettering with drawing pens.

With the help of microprocessors, all plotting operations are performed by program control; the interchangeable drawing pens are guided with utmost precision in vertical and horizontal steps.

The standard program of the rotring NC-scriber embraces altogether 140 characters, digits and symbols which can be called in by operating keys.

Characters and symbols of between 1 mm and 30 mm in size can be pre-set in increments of 0.1 mm via keyboard entry. The rotring NC-scriber consists of a functional unit, designed to fit onto the drawing head of a track-guided drafting machine, complete with input keyboard and plotter arm, and the control unit with transformer and program stores. A flexible cable connects the two units with one another.



## The functional unit

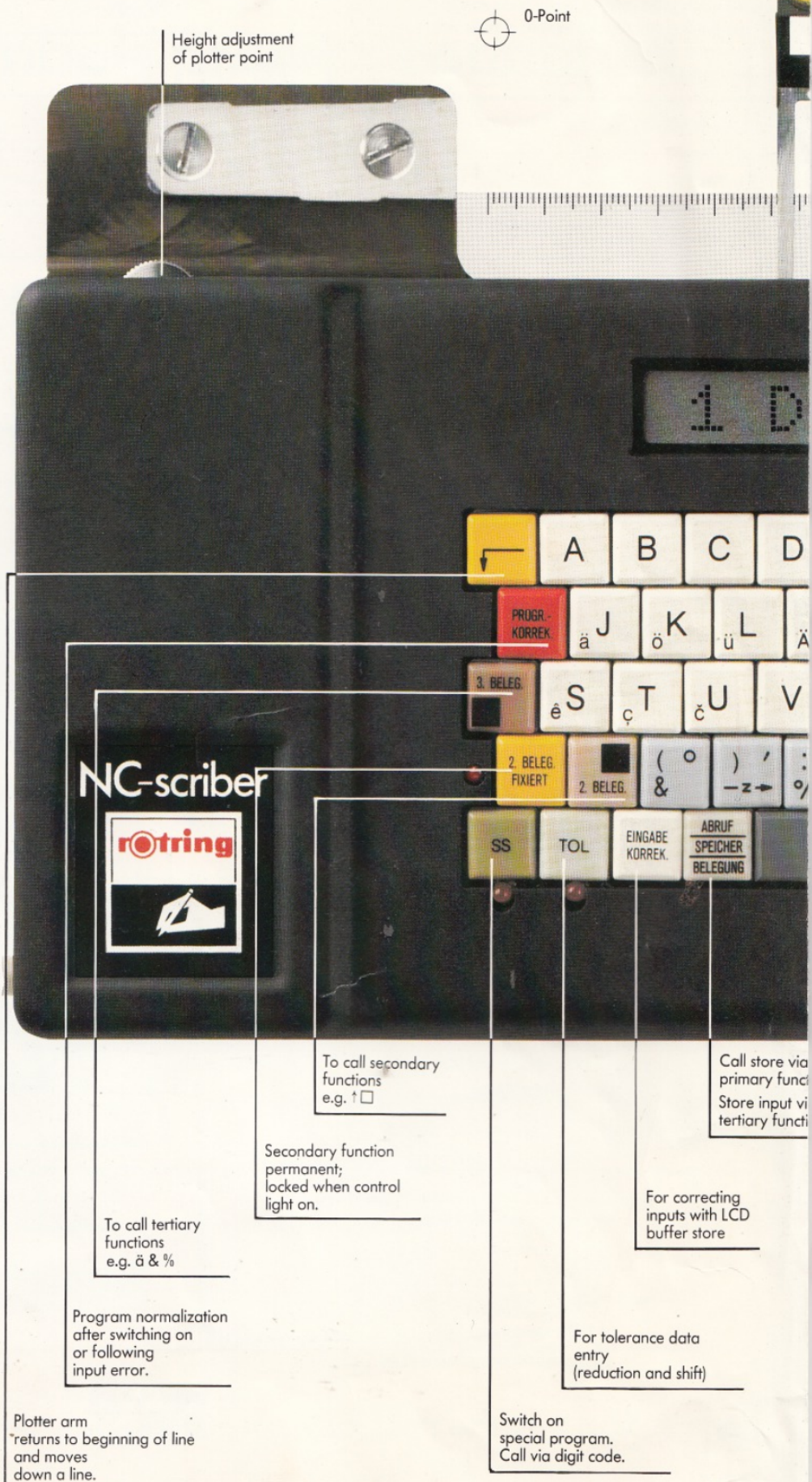
is a handy instrument with a clearly arranged, easy-to-operate entry keyboard. By furnishing most of the input keys with multiple functions (maximum of 3), a whole range of digits and symbols can be called in. The 16-digit LC-Display permits the input symbols to be checked before the instruction to write is given.

1 DIN 472 10

A diode lights up when the secondary function of an input key is in use.

The writing mechanism of the rotring NC-scriber is operated by stepping motors which transmit the incoming control signals into plotting motions. The up and down movements of the drawing pen are controlled by electro-magnetism.

The plotting speed depends on the size of character or symbol selected. With 3.5 mm size lettering, the NC-scriber draws two characters per second.





# rotating NC-scriber in next to no time . . .

Plotter arm

The plotter arm can accommodate all types of standard thread drawing pens, without the holder.

The size of the plotting area is 160 x 40 mm. For exact parallel guidance, the functional unit of the NC-scriber is attached to the drawing head of a track-guided drafting machine by means of a connecting plate.

## The control unit

The power supply and control electronics unit are supplied in a handy case in which there is also room for the functional unit of the NC-scriber. The device is designed for mains power supplies.

The appropriate connecting cables are affixed permanently to the control unit.



For performing special programs, a program cassette is inserted into the control unit's function aperture. A green diode on the program cassette lights up when the special program is ready for operation.

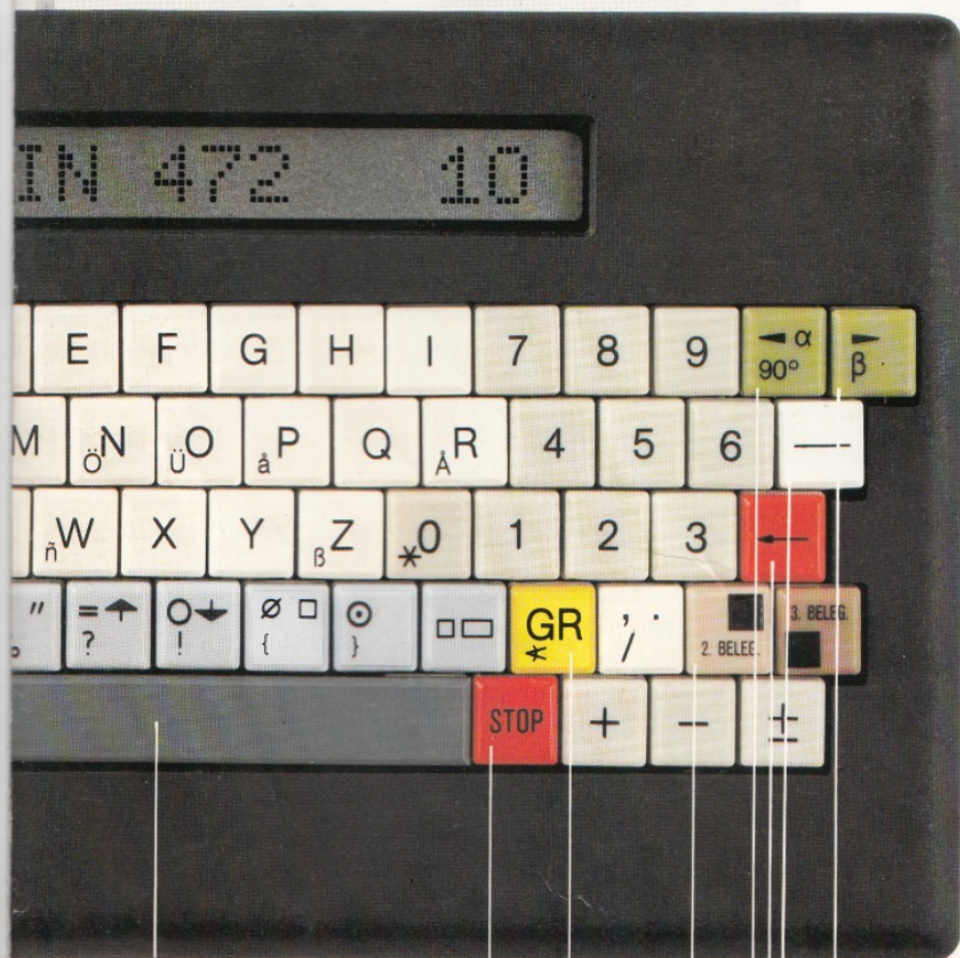
## Rapid familiarisation thanks to clear technical design

The keyboard of the NC-scriber was designed along applications engineering lines. It takes the user just a few hours to get familiar with the apparatus. All the input and operation keys are clearly arranged and can be worked easily with one hand.

Red diodes near some operation keys light up when the corresponding special function is in use. All entries are treated in logical sequence. There are two ways of transforming input instructions into executive instructions:

1. Immediately after entry
2. After error check on the LC-Display, stored characters and symbols can be retrieved by key operation.

Up to 25 character and symbol entries can be stored. The last 16 entered appear on the LC-Display.



ion  
a  
on key

Spacing key

Immediate interruption  
of output  
and deletion  
of inputs

Primary function:  
pre-setting of symbol size  
(e.g. GR 050 = 5 mm)  
Tertiary function:  
slope of lettering

To call secondary  
functions  
e.g.  $\uparrow$   $\square$

Primary function:  
dimensioning  
arrow left  
Secondary function:  
output from buffer  
store (LCD)  
Tertiary function:  
plotting direction  
changes 90°

Plotter arm  
returns to  
beginning of first line

Primary function:  
dimensioning  
arrow right  
Tertiary function:  
inputs in buffer  
store (LCD)

Draws line  
as long as  
key depressed



# Delegate these jobs to the rotring NC-scriber:

## Lettering in a matter of seconds

True to standard in accordance with ISO 3098/1, lettering type B (DIN 6776), in small letters and capital letters.

You determine the size of the characters yourself by keying in the desired format.

The size of all characters can be varied true to proportion between 1.0 and 30.0 mm in steps of 1/10 mm.

The correct spacing between letters is set automatically. There is a spacing key for leaving blanks between words.

The NC-scriber also takes care of the right line spacing when shifting to the next line.

## Exact dimensioning

Dimensioning figures are keyed into the finished drawing quickly and smoothly, and dimensioning arrows, too, are drawn in the correct proportions.

Since the NC-scriber is firmly attached to the drawing head of the track-guided drafting machine, positioning the device presents no problems. The point of the inserted drawing pen simply moves to the starting position and off you go.

## Tolerance data – no problem!

Yes indeed, tolerance data present no problem whatsoever for the NC-scriber.

The tolerance data together with the appropriate sign are automatically reduced and correctly positioned.

## Storing texts and symbols

By using the input keys 0 to 9, altogether 10 stores can be made available for 320 entries. Texts and dimensioning data which are repeatedly in use can be retrieved and utilised as often as required by simply operating the appropriate key. When new data are entered into the store, the old data are automatically deleted.

## Special symbols à la carte

The rotring NC-scriber plots special symbols on insertion of an appropriate program cassette into the control unit. A corresponding code card indicates the input code with which the special symbols can be called in via the keyboard. Our rotring engineers will gladly assist you in composing special programs.

## LETTERING SAMPLE

This lettering was produced with the rotring NC-scriber. The characters drawn with the appropriate pens are in compliance with the standard ISO 3098/1, lettering type B.

### Vertical lettering:

ABC abcd 1234

ABCD abcdef 12345

ABCDE abcdefgh 1234567

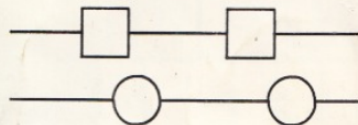
### Inclined lettering:

ABC abcd 1234

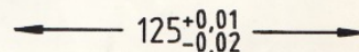
ABCD abcdef 12345

ABCDE abcdefgh 1234567

### General symbols:



### Dimensioning with tolerance data:



## Technical data

Lettering format:	X-axis 160 mm, Y-axis 40 mm
Plotting instrument:	Drawing pen with standard thread
Accuracy and reproduction:	Line composition in steps of 0.01 mm
Drawing speed:	Approx. 2 symbols per sec. (h = 3.5 mm)
Symbol sizes:	1–30 mm in 1/10 mm increments
Character spacing:	Automatic, proportional, in accordance with ISO 3098/1 (DIN 6776)
Line spacing:	Automatic, proportional, in accordance with ISO 3098/1 (DIN 6776)
Line shift:	Automatic and manual
Functional unit:	Size 280 x 135 x 34 mm Weight approx. 1000 g
Control unit:	Size 420 x 330 x 120 mm Weight approx. 5000 g



# Logical entry gets the right result – quickly and confidently.

The following examples illustrate the straightforward method of entry and the wide range of opportunities that the rotating NC-scriber has to offer in the way of rational and true-to-standard lettering on technical documents.

	INPUT	RESULT
MOVE TO STARTING POINT		
CHARACTER HEIGHT, e.g. select h = 7 mm		After depressing symbol keys
WRITE: a b c d		abcd
CAPITAL LETTERS: A B C D		ABCD
SMALL LETTERS AND CAPITAL LETTERS: Test		Test
WRITE UMLAUTS: Übung		Übung
STOP PLOTTING PROCEDURE		The symbol just started is finished off. The entry is deleted.
ERROR CONTROL Input error in buffer appearing on LC-Display is corrected as follows:	  	
PLOTTING INSTRUCTION		Fehler
Set left dimensioning arrow: Set right dimensioning arrow: Duration of pressure on key determines length of dimensioning line		 
Set dimensioning figure: e.g. 35		
Set dimensioning figure with tolerances: e.g. 80 $\begin{smallmatrix} +0.2 \\ -0.1 \end{smallmatrix}$	 	80 $\begin{smallmatrix} +0.2 \\ -0.1 \end{smallmatrix}$

From 1981 onwards the NC-scriber will feature also the following characters and symbols:

é è á à â ç í ó ú œ æ Æ ø ð ã  
ì ï ò ù û ô û è Ë Ñ Æ

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